REMARKS

Claims 1-2, and 4-27 remain in this application. Claims 1, 12, 15, and 18 have been amended. The amendments are supported by the specification and no new matter has been added. Additionally, since the amendments are based on limitations that have been earlier presented (see e.g., prior claim 3), the amendments should not raise new issues for consideration or search. Claim 3 has been cancelled without prejudice. No claims have been added. The Applicants respectfully request reconsideration of this application in view of the above amendments and the following remarks.

35 U.S.C. §102 Rejection – Perry

The Examiner has rejected claims 1-7, 9, 10, 12, 14-20 and 22 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,483,518 issued to Perry et al. (hereinafter referred to as "Perry"). Applicants respectfully submit that Perry does not anticipate claim 1.

As amended, **claim 1** recites a method comprising at least, "*accessing graphical data for a plurality of nodes that represent a portion of a surface of a three-dimensional object, the graphical data including local coordinate system data that indicates a local coordinate system for the plurality of nodes*". The Applicants respectfully submit that Perry does not anticipate claim 1 for at least the reasons that Perry does not teach or suggest local coordinate system data that indicates a local coordinate system for the plurality of nodes.

As understood by the Applicants, Perry discusses using a single world coordinate system for all cells of a bounding box surrounding an object. As discussed at column 7, line 64, through column 8, line 3: "*FIG. 1 shows a bounding box 100 enclosing a portion of a distance field associated with an object 101. In 2D, the bounding box 100 is located*

in some world coordinate space defined by an origin 103 and axes 104 and 105. The space enclosed by the bounding box is defined in terms of the coordinates of the world coordinate space. The size and location of the bounding box is specified by its vertices 109". Also, the bounding box may be hierarchically partitioned into cells (see e.g., column 8, lines 22-29).

Perry discusses that the hierarchical distance fields may be represented by data structures. Figure 4 of Perry shows a hierarchical distance field (HDF) 400 including an HDF header 500 and cell data 600. The HDF header specifies and defines the bounding box presumably in terms of the world coordinates. "*As shown in FIG. 5, the HDF header 500 can include a bounding box specification 510 defining the bounding box 100 of the HDF*" (column 9, lines 50-52). The HDF header includes a pointer 560 to the cell data 600.

Perry does not teach or suggest that the cell data for individual cells of the bounding box may include local coordinate system data that indicates a local coordinate system for the plurality of nodes. FIG. 6 of Perry is a block diagram of the cell data. Applicants have carefully reviewed FIG. 6 and have found absolutely no coordinate system data. As understood by Applicants, Perry discusses using a different approach based on a hierarchical structure to relate the cells to the bounding box. As shown in FIG. 6, the cell data includes pointers to children cells 640 and a pointer to a parent cell 640. The hierarchical structure and the pointers interrelate the cells to one another and to the bounding box.

Applicants submit that such a hierarchical structure may potentially introduce disadvantages, such as complicating parallel processing of the graphical data in different rendering units. As discussed in the patent application, "*According to one embodiment, and in contrast to triangle vertices, a coordinate system may be local to a spatial patch*

and independent of and unrelated to coordinate systems of other spatial patches. This independence may facilitate parallel processing of the two spatial patches" (paragraph [0034]). In any event, it is clear that Perry does not teach or suggest the claimed local coordinate system data that indicates a local coordinate system for the plurality of nodes.

Anticipation under 35 U.S.C. Section 102 requires every element of the claimed invention be identically shown in a single prior art reference. The Federal Circuit has indicated that the standard for measuring lack of novelty by anticipation is strict identity. "*For a prior art reference to anticipate in terms of 35 U.S.C. Section 102, every element of the claimed invention must be identically shown in a single reference.*" In Re Bond, 910 F.2d 831, 15 USPQ.2d 1566 (Fed. Cir. 1990).

For at least these reasons, claim 1 is believed to be allowable over Perry. **Claims 2-11 and 23** depend from claim 1 and are believed to be allowable therefor, as well as for the recitations independently set forth therein.

Claim 12 15, 18 and 25 each recites at least "*local coordinate system data*" and are believed to be allowable for reasons similar to those discussed above for claim 1. **Claims 13-14 and 24** depend from claim 12, **claims 16-17** depend from claim 15, **claims 19-22** depend from claim 18, and claims 26-27 depend from claim 25. These dependent claims are believed to be allowable therefor, as well as for the recitations independently set forth therein.

35 U.S.C. §103(a) Rejection – Perry in view of Cox

The Examiner has rejected claim 8 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,483,518 issued to Perry et al. (hereinafter referred to as "Perry") in view of U.S. Patent No. 5,751,931 issued to Cox et al. (hereinafter referred to "Cox"). The Applicants respectfully submit that the present claims are allowable over any

combination of Perry and Cox.

As discussed above, Perry does not teach or suggest local coordinate system data that indicates a local coordinate system for the plurality of nodes. Without admitting the appropriateness of combining Perry and Cox, the Applicants respectfully submit that these limitations are also missing from Cox. For at least these reasons, claim 1 is believed to be allowable over any combination of Perry and Cox, and dependent **claim 8** is believed to be allowable therefor, as well as for the recitations independently set forth therein.

35 U.S.C. §103(a) Rejection – Perry

The Examiner has rejected claims 11, 13 and 21 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,483,518 issued to Perry et al. (hereinafter referred to as "Perry"). The Applicants respectfully submit that the present claims are allowable over Perry.

As discussed above, Perry does not teach or suggest local coordinate system data that indicates a local coordinate system for the plurality of nodes. Accordingly, claim 1 is believed to be allowable. **Claim 11** is believed to be allowable therefore as well as for the recitations independently set forth therein. Independent claims 12 and 18 are believed to be allowable for similar reasons, since Perry does not teach or suggest "*local coordinate system data*". **Claims 13 and 21** depend from either claim 12 or 18 and are believed to be allowable therefore as well as for the recitations independently set forth therein.

35 U.S.C. §103(a) Rejection – Perry in view of Johns

The Examiner has rejected claim 27 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,483,518 issued to Perry et al. (hereinafter referred to

as "Perry") in view of U.S. Patent No. 6,366,289 issued to Johns (hereinafter referred to as "Johns"). The Applicants respectfully submit that the present claims are allowable over any combination of Perry and Johns.

As discussed above, Perry does not teach or suggest local coordinate system data. Without admitting the appropriateness of combining Perry and Johns, the Applicants respectfully submit that these limitations are also missing from Johns. For at least these reasons, claim 25 is believed to be allowable over any combination of Perry and Johns. Dependent **claim 27** is believed to be allowable therefor, as well as for the recitations independently set forth therein.

Conclusion

Applicants respectfully submit that the rejections have been overcome by the amendments and remark, and that the claims as amended are now in condition for allowance. Accordingly, Applicants respectfully request the rejections be withdrawn and the claims as amended be allowed. The Examiner is requested to call Brent E. Vecchia at (303) 740-1980 if there remains any issue with allowance of the case.

Request For Telephone Interview

The Examiner is invited to call Brent E. Vecchia at (303) 740-1980 if there remains any issue with allowance of the case.

Request For An Extension Of Time

The Applicant(s) respectfully petitions for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17 for such an extension.

Charge Our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: OCT. 28, 2003

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